

A Business Analysis of 17 Farm Roadside Markets in Ohio

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BRUCE O. BURNHAM and M. E. CRAVENS¹

INTRODUCTION

The size and location of many fruit and vegetable production units in Ohio is conducive to farm retail marketing. Many producers do not have enough volume to obtain an adequate income from wholesaling outlets. In such cases, farm retail markets may be the most profitable means of marketing fresh fruits and vegetables. By conducting their own retailing, farm producers often can enlarge their volume of business and appreciably increase their family income.

Present Situation and Trends in Ohio

Two separate studies, one in 1950 and another in 1964, indicated that approximately two-thirds of the roadside markets doing business in northeast Ohio in 1950 and 1964 were established after World War II (Appendix Table I). In most instances, farms have become more specialized with greater and greater dependence on purchased inputs and on sale of products through specialized sales agencies. Despite this, many Ohio fruit and vegetable producers have continued the use of retail selling.

Objectives

The specific objectives of this study were to:

1. Describe the nature and value of assets used in farm roadside markets.
2. Determine the nature and amount of costs, type of products sold, and value of sales.
3. Determine the extent of purchased vs. home-produced goods, the number of items sold, and to describe the market location and related factors.
4. Determine the relation of these market characteristics to returns to management and labor.

Study Method

The 17 markets in this study were selected from 118 markets located by a census study of roadside markets in northeast Ohio² concluded in the summer of 1964.

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²Cravens, M. E., Thomas A. Bennett and J. E. Jeffries. 1967. Retail Farm Marketing in Northeast Ohio. Ohio Agri. Res. and Dev. Center, Res. Circ. 150.

TABLE 1.—Counties in Which the 17 Markets Were Located.

Counties	Number of Markets in Each County
Mahoning	1
Trumbull	1
Geauga	2
Columbiana	3
Wayne	3
Lorain	7
Total	17

The markets were from six counties selected at random to represent the northeast Ohio area (Table 1). Individual markets selected in these counties were those with annual sales between \$5,000 and \$110,000 whose proprietors would cooperate and those with sufficient data for analyses. Data on costs and returns were obtained for the 1964 and 1965 seasons.

Thirty-five percent of the markets in this analysis were established between 1940 and 1949 and 65 percent were established during the period 1955-1964.

The 17 markets were of four types in reference to structure and facilities. Six of the markets consisted of stands having a storage facility in conjunction with the market. One market operated in its storage facility and seven markets had a sales area in conjunction with a packing house (the retail unit did not have a separate storage area). The remaining three markets were classified as "stands" with neither storage nor packing house.

Nature of Report

This report consists of an analysis of the markets on the basis of volume of sales and an analysis of markets on the basis of those with high, medium, or low net profits. In addition, averages of all 17 markets are discussed. In the entire analysis, emphasis is placed on assets, sales, cost of goods sold, expenses, returns to management and labor, population in the market area, products handled, hours spent operating the market, and price policy.

Definition of Market

A farm roadside market is defined as a retail roadside market having a permanent facility and operated in conjunction with an agricultural producing unit. At least one-third of the market's gross sales must be derived from the sale of home-produced products and its products must include at least one of the following: strawberries, apples, peaches or tomatoes.

TABLE 2.—Value of Assets for 17 Roadside Markets, Ohio, 1964-1965.

Asset Item	Average Value per Market			
	1964	1965	1964	1965
	Dollars	Dollars	Percent	Percent
Buildings	4,899	4,659	73	73
Land	785	785	12	12
Machinery and Equipment	515	464	8	8
Sales Facilities	509	459	7	7
Total Value	6,708	6,367	100	100

BUSINESS ANALYSIS BY SALES VOLUME

Assets

Assets of the 17 markets included: buildings, land, machinery and equipment, and sales facilities. The buildings housed the retail operations and included all permanent fixtures. Land included the building site as well as the parking area. Items which were not directly involved with the exchange function but necessary for the preparation of products for sale were classified as machinery and equipment. Sales facilities were those directly involved with the selling function.

Total asset value of the 17 farm roadside markets in 1965 was \$108,232, an average of \$6,367 per market (Table 2). Asset value was lower in 1965 than 1964 since the addition to assets was less than depreciation. The value of the buildings used by the markets ranged from \$600 to \$26,000 and averaged 73 percent of total market assets.

Average value of total assets varied substantially among the three market size groups. In 1965, assets in the small volume markets averaged \$3,338 per market, medium \$5,582, and large \$16,011 (Table 3)³. Buildings accounted for approximately two-thirds and three-fourths of assets in the medium and large volume markets (Table 3). Real estate was more than 80 percent of total assets in each size group.

For all markets, annual sales in 1965 amounted to \$3.80 per \$1 invested in assets. For the small markets, sales were \$3.40 per \$1 invested compared with \$4.00 for medium and \$3.80 for large size markets.

Retail Sales

Average sales for the 17 markets increased annually from 1962 to 1965 with the exception of 1963 (Appendix Table II). The decrease in sales during 1963 was due to the poor fruit crop resulting from winter bud kill.

³Small volume, less than \$15,000 annual sales; medium volume, \$15,000-30,000 annual sales; large volume, more than \$30,000 annual sales.

Fruit sales in 1965 averaged \$17,505 per market and were 72.9 percent of gross sales (Appendix Table III). Vegetables accounted for 14.5 percent of sales, "other food" 12.3 percent, and non-food items less than 1 percent of sales.

Apples accounted for more than two-thirds of fruit sales in 1965 and were approximately 50 percent of total sales (Table 4). Peaches were the second largest item in fruit sales and also in gross sales. The largest item in vegetable sales was potatoes, with sweet corn next.

Eggs accounted for almost half and miscellaneous items one-third of "other food" sales. Non-food sales, mostly annual plants and apple slicers, accounted for less than \$100 per market or 0.5 percent of sales.

In 1965, fruit and fruit products were approximately 88 percent of gross sales in the small markets compared with approximately two-thirds of sales in the medium and large markets (Appendix Table IV).

Vegetables varied substantially as a percentage of gross sales and accounted for the highest percentage among the medium size markets. The percent of sales accounted for by vegetables for the largest markets was approximately triple the same figure for the small markets.

The percent of sales accounted for by "other food" products was higher in large markets than in other size markets (Appendix Table

TABLE 3.—Value of Assets for 17 Roadside Markets by Sales Classes, Ohio, 1965.

Class and Item	Average Value of Assets	
	1965	1965
	Dollars	Percent
Small (less than \$15,000)		
Buildings	2,191	66
Land	481	14
Machinery and Equipment, Sales Facilities	666	20
Total Eight Markets	3,338	100
Medium (\$15,000-\$30,000)		
Buildings	4,243	76
Land	667	12
Machinery and Equipment, Sales Facilities	672	12
Total Six Markets	5,582	100
Large (more than \$30,000)		
Buildings	12,072	75
Land	1,833	11
Machinery and Equipment, Sales Facilities	2,106	14
Total Three Markets	16,011	100

IV). For the small markets, "other food" products were approximately 6 percent of gross sales compared with about 18 percent for the large markets.

Apples accounted for 76.7 percent of fruit sales in the medium size markets and approximately 61 percent of fruit sales in the small and large markets (Table 5). Peaches were one-fifth of fruit sales in the small and approximately one-tenth of fruit sales in medium and large markets. Cider accounted for 5.7 percent of fruit sales in the small markets and 14.2 percent in the large markets. Volume and proportion of other fruit products sold increased as the markets became larger.

Sweet corn as a percent of vegetable sales in the small markets was twice as large as in the large markets. Potatoes accounted for a much larger portion of vegetable sales in large markets than in the small markets.

TABLE 4.—Percent of Sales by Specific Items, 1965.

Product	Sales Group Breakdown	Average Sales per Market	Gross Sales Breakdown
	Percent	Dollars	Percent
Fruit			
Apples	68.2	11,938	49.7
Peaches	12.4	2,171	9.0
Strawberries	3.5	613	2.6
Cider	8.6	1,505	6.3
Other Fruit	<u>7.3</u>	<u>1,278</u>	<u>5.3</u>
Total and Average	100.0	17,505	72.9
Vegetables			
Sweet Corn	27.2	945	3.9
Tomatoes	12.2	424	1.8
Potatoes	30.0	1,043	4.3
Other	<u>30.6</u>	<u>1,064</u>	<u>4.5</u>
Total and Average	100.0	3,476	14.5
Other Food			
Eggs	48.3	1,427	5.9
Meat and Cheese	13.7	405	1.7
Honey	.5	15	.1
Jams and Jellies	2.2	65	.3
Other	<u>35.3</u>	<u>1,042</u>	<u>4.3</u>
Total and Average	100.0	2,954	12.3
Non-Food Items	100.0	84	.3
Total Sales		24,019	100.0

*Three markets were not able to break down sales by specific items. The sales of these three markets were distributed on the basis of breakdowns given by 14 markets.

TABLE 5.—Average Sales of Specific Products by Small, Medium, and Large Classes, Ohio, 1965.*

Product	Eight Small (less than \$15,000)		Six Medium (\$15-30,000)		Three Large (more than \$30,000)	
	Av. Sales per Mkt.	Percent of Each Category	Av. Sales per Mkt.	Percent of Each Category	Av. Sales per Mkt.	Percent of Each Category
	1965	1965	1965	1965	1965	1965
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Fruit						
Apples	6,195	61.8	11,954	76.7	24,848	60.2
Peaches	2,102	21.0	1,481	9.5	3,508	8.5
Strawberries	633	6.3	—	—	1,940	4.7
Cider	584	5.7	1,122	7.2	5,861	14.2
Other	517	5.2	1,029	6.6	5,118	12.4
Total	10,031	100.0	15,586	100.0	41,275	100.0
Vegetables						
Sweet Corn	383	59.5	—	—	2,968	33.0
Tomatoes	114	17.9	—	—	1,493	16.6
Potatoes	22	3.4	—	—	2,086	23.2
Other	124	19.2	4,495	100.0	2,446	27.2
Total	643	100.0	4,495	100.0	8,993	100.0
Other Food						
Eggs	402	62.4	334	15.3	6,000	56.3
Meat and Cheese	—	—	96	4.4	2,004	18.8
Honey	10	1.6	107	4.9	171	1.6
Jams and Jellies	—	—	—	—	63	.6
Other	232	36.0	1,646	74.4	2,419	22.7
Total	644	100.0	2,183	100.0	10,657	100.0
Non-Food Items	47	100.0	156	100.0	40	100.0
Total Sales	11,365		22,420		60,965	

*One market in each class was unable to break down sales by specific items. The sales of these three markets were distributed on the basis of breakdowns given by 14 markets.

TABLE 6.—Cost of Goods Sold by 17 Farm Roadside Markets, Ohio, 1965.

Product	Average Cost of Goods Sold per Market	Percent in Each Class of Total Cost of Goods Sold	Percent of Each Class Which Was Purchased
	1965	1965	1965
	Dollars	Percent	Percent
Fruit	11,555	70.4	29.5
Vegetables	2,512	15.3	59.0
Other Food	2,287	13.9	92.9
Non-Food	60	.4	100.0
Total	16,414	100.0	46.2

Eggs were the most important “other food” item in all three size classes. However, eggs as a percent of other food sales were about four times greater in the small and large markets than in medium size markets. The dollar volume of egg sales was more than ten times greater in the large markets than in small or medium markets (Table 5). Meats and cheeses were of almost no importance in the average small and medium size markets. Among the large markets, they were a significant sales item.

Sales by small markets in 1965 were 8.7 percent more than 1964 sales, by medium size markets 4.7 percent higher, and by large markets 19 percent above the 1964 level. The major items of increase for the large markets were fruits, mostly apples, and “other food” items, particularly eggs.

Cost of Goods Sold

Fourteen of the 17 markets sold purchased goods as well as home-produced items and the other three markets sold only home-produced products.⁴

The average cost of goods sold by the 17 markets in 1965 was \$16,414 (Table 6). Approximately 30 percent of the fruit, 59 percent of the vegetables, and 93 percent of “other food” products were purchased.

As sales volumes increased, the percentage of each class of merchandise purchased also increased. In small and medium markets, approximately 80 percent of the fruit sold was home produced while for large markets, less than 60 percent was home produced (Table 7). About one-third of the vegetables sold in large and small markets were home produced while in the medium size almost half of the vegetables

⁴Eight markets estimated a percent of retail value as cost for home-produced products. Nine of the markets gave a unit value as the wholesale price of home-produced products. These two methods of evaluating home-produced products gave comparable results.

were home produced. More than half of the "other food" items in the small markets were home produced while in the large markets none of the "other food" items were home produced.

Expenses

Expenses for the 17 markets in 1965 averaged \$5,086 (Table 8). Hired labor was the largest expense, followed by containers and packages, family labor, depreciation, and interest on owned capital. These five expenses accounted for 68 percent of total expenses. Labor, including family labor, accounted for 38.2 percent of all expenses.

The type of expense varied as market size changed. Containers and packages were 20.0 percent of expenses in small markets, 24.0 percent in the medium markets, and only 11.2 percent in the large markets (Table 9). The significantly lower percent in large markets may be due to the fact that the larger markets more commonly used paper containers instead of baskets to display and sell fruit. Paper containers are much less expensive than splint baskets and cardboard containers.

TABLE 7.—Cost of Goods Sold by Three Market Classes, Ohio, 1965.

Product and Class	Average Cost of Goods Sold per Market	Percent of the Total Cost of Goods Sold	Percent of Each Which Was Purchased	Percent of Each Which Was Home Produced
	1965	1965	1965	1965
	Dollars	Percent	Percent	Percent
Small (less than \$15,000)				
Fruit	6,320	86.5	20.1	79.9
Vegetables	479	6.6	69.1	29.9
Other Food	480	6.6	43.1	56.9
Non-Food	29	.3	100.0	—
Total	7,308	100.0		
Medium (\$15,000-30,000)				
Fruit	10,574	68.3	19.8	80.2
Vegetables	3,376	21.8	53.1	46.9
Other Food	1,427	9.2	93.1	6.9
Non-Food	116	.7	100.0	—
Total	15,493	100.0		
Large (more than \$30,000)				
Fruit	27,478	64.6	42.7	57.3
Vegetables	6,204	14.6	63.5	36.5
Other Food	8,827	20.7	100.0	—
Non-Food	33	.1	33.3	66.7
Total	42,542	100.0		

Labor was a slightly greater percentage of total expenses in the large markets than in the small markets. Family labor was generally a much smaller portion and hired labor a larger portion of expenses in the large than in the small or medium size markets (Table 9). Truck and automobile expense increased substantially as the market size increased.

Returns to Management

Returns to management for the 17 markets in 1965 were 10.5 percent of sales (Table 10). Returns to management plus family labor were 13.4 percent of sales and net operating margin was 14.8 percent. Gross margin was 31.7 percent of sales and cost of goods sold 68.3 percent (Table 10).

Returns to management, returns to management plus family labor, net operating margin, and gross market margin were a lower percent of sales in the large than in other markets. However, the dollar value for each of these items was greatest in the large markets (Table 11). The managers of medium size markets earned \$4.62 per hour, while the large market managers received \$4.07 per hour and the small market managers \$1.51 per hour (Table 11).

TABLE 8.—Summary of Expenses for 17 Farm Roadside Markets, Ohio, 1965.

Expense	Average per Market	Percent of Total Expenses	Percent of Total Sales
	1965	1965	1965
	Dollars	Percent	Percent
Hired Labor	1,232	24.2	5.1
Family Labor	711	14.0	3.0
Containers and Packages	858	16.9	3.6
Advertising	281	5.5	1.2
Depreciation	342	6.7	1.4
Interest on Owned Capital	314	6.2	1.3
Utilities	311	6.1	1.3
Truck and Auto	300	5.9	1.2
Repairs	93	1.8	.4
Taxes	159	3.1	.7
Insurance	166	3.3	1.7
Heat	59	1.2	.2
Rent	110	2.2	.5
Office	68	1.3	.3
Miscellaneous	82	1.6	.3
Total	5,086	100.0	22.2

TABLE 9.—Summary of Expenses for Small, Medium, and Large Markets, Ohio, 1965.

Expense	Small		Medium		Large	
	Av. per Market	Percent of Expenses	Av. per Market	Percent of Expenses	Av. per Market	Percent of Expenses
	1965	1965	1965	1965	1965	1965
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Containers and Packages	535	20.0	1,006	24.0	1,422	11.2
Family Labor	413	15.4	874	20.8	600	4.7
Hired Labor	546	20.4	648	15.4	4,234	33.3
Interest on Owned Capital	166	6.2	279	6.6	777	6.1
Depreciation	189	7.1	298	7.1	837	6.6
Advertising	187	7.0	364	8.7	367	2.9
Utilities	222	8.3	190	4.5	792	6.2
Truck and Auto	65	2.4	173	4.1	1,183	9.3
Repairs	11	.4	58	1.4	383	3.0
Taxes	94	3.5	141	3.4	367	2.9
Insurance	89	3.3	88	2.1	529	4.2
Heat	18	.7	53	1.3	182	1.4
Rent	50	1.9	—	—	488	3.8
Office	53	2.0	22	5	200	1.6
Miscellaneous	37	1.4	3	.1	362	2.8
Total	2,675	100.0	4,197	100.0	12,723	100.0

BUSINESS ANALYSIS BY PROFIT GROUPS

The five markets with the lowest total return to management were grouped as a low profit group and the five markets with the highest return to management comprised the high profit group. The remaining seven markets were classified as having intermediate profits.

Type of Facility and Assets

Three of the five low profit and two of the five high profit markets operated sales stands with a separate storage. On the other hand, the remaining three high profit markets and none of the low profit markets operated from sales rooms in a portion of the packing house (Table 12).

Investment of fixed assets in the low profit markets averaged \$4,636, in intermediate markets \$5,799, and in high profit markets \$8,894 (Table 13). The building value was a slightly greater proportion of total assets in the high profit than in the low profit group, while land and equipment, machinery, and other facilities were slightly less (Table 13).

For each \$1 invested in real estate, equipment, and facilities, the low profit markets realized annual sales of \$2.60 compared to \$4.20 for intermediate profit markets and \$4.00 for high profit markets.

Retail Sales

Sales averaged \$12,045 for the low profit group, \$24,168 for the intermediate group, and \$35,798 for the high profit markets (Appendix

TABLE 10.—Returns to Management for 17 Farm Roadside Markets, Ohio, 1964-1965.

Item	Average per Market		Percent	
	1964	1965	1964	1965
	Dollars	Dollars	Percent	Percent
Total Sales	21,157	24,019	100.0	100.0
less Cost of Goods Sold	14,762	16,414	68.6	68.3
Gross Margin	6,755	7,605	31.4	31.7
less Expenses*	3,382	4,061	15.7	16.9
Net Operating Margin	3,373	3,544	15.7	14.8
less Interest on Owned Capital	334	314	1.6	1.3
Returns to Management and Family Labor	3,039	3,230	14.1	13.4
less Family Labor	838	711	3.9	2.9
Total Returns to Management†	2,201	2,519	10.2	10.5
Returns to Management per Hour‡		2.87		

*Except interest on owned capital and family labor.

†Returns to management include the operator's labor.

‡Not available for 1964.

TABLE 11.—Returns to Management for Small, Medium, and Large Markets, Ohio, 1965.

Item	Small		Medium		Large	
	Av. per Market	Percent	Av. per Market	Percent	Av. per Market	Percent
	1965	1965	1965	1965	1965	1965
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Total Sales	11,365	100.0	22,420	100.0	60,694	100.0
less Cost of Goods Sold	7,308	64.3	15,493	69.1	42,542	70.1
Gross Margin	4,057	35.7	6,927	30.9	18,152	29.9
less Expenses*	2,096	18.4	3,045	13.6	11,346	18.7
Net Operating Margin	1,961	17.3	3,882	17.3	6,806	11.2
less Interest on Owned Capital	166	1.5	276	1.2	777	1.3
Returns to Management						
plus Family Labor	1,795	15.8	3,606	16.1	6,029	9.9
less Family Labor	413	3.6	874	3.9	600	1.0
Total Returns to Management†	1,382	12.2	2,732	12.2	5,429	8.9
Returns to Management per Hour	1.51	—	4.62	—	4.07	—

*Except interest on owned capital and family labor.

†Returns to management include the operator's labor.

TABLE 12.—Physical Structure of the Low, Intermediate, and High Profit Markets.

Profit Group	Number of Markets in Each Group				Total Markets
	Stand with Storage	Sales Room in Packing House	Stand Only	Sales Room in Refrigerated Storage	
Low	3	—	1	1	5
Intermediate	1	4	2	—	7
High	2	3	—	—	5
	—	—	—	—	—
Total	6	7	3	1	17

TABLE 13.—Value of Physical Assets of Low, Intermediate, and High Profit Markets, Ohio, 1965.

Asset	Total Value	Average per Market	Percent of Total	Percent of Sales
Five Low Profit Markets				
	Dollars	Dollars	Percent	Percent
Buildings	16,577	3,315	71.5	
Land	3,200	640	13.8	
Machinery and Equipment, Sales Facilities	3,406	681	14.7	
Total	23,183	4,636	100.0	38.5
Seven Intermediate Profit Markets				
	Dollars	Dollars	Percent	Percent
Buildings	28,380	4,056	69.9	
Land	5,150	736	12.7	
Machinery and Equipment, Sales Facilities	7,046	1,007	17.4	
Total	40,576	5,799	100.0	24.0
Five High Profit Markets				
	Dollars	Dollars	Percent	Percent
Buildings	34,247	6,849	77.0	
Land	5,000	1,000	11.2	
Machinery and Equipment, Sales Facilities	5,226	1,045	11.8	
Total	44,473	8,894	100.0	24.8

TABLE 14.—Average Sales of Individual Items for Low, Intermediate, and High Profit Markets, Ohio, 1965.

Product	Low Profit			Intermediate Profit			High Profit		
	Average Sales per Market	Percent of Class Sales	Percent of Gross Sales	Average Sales Per Market	Percent of Class Sales	Percent of Gross Sales	Average Sales per Market	Percent of Class Sales	Percent of Gross Sales
Fruit	Dollars	Percent	Percent	Dollars	Percent	Percent	Dollars	Percent	Percent
Apples	3,513	50.3	29.2	13,250	72.9	54.8	17,720	65.4	49.5
Peaches	901	12.9	7.5	1,781	9.8	7.4	4,362	16.1	12.2
Strawberries	1,083	15.5	9.0	382	2.1	1.6	—	—	—
Cider	531	7.6	4.4	1,581	8.7	6.5	2,357	8.7	6.6
Other Fruit	957	13.7	7.9	1,181	6.5	4.9	2,656	9.8	7.4
Total	6,985	100.0	58.0	18,175	100.0	75.2	27,095	100.0	75.7
Vegetables									
Potatoes	527	15.3	4.4	1,240	29.5	5.1	1,140	45.8	3.2
Sweet Corn	141	4.1	1.2	622	14.8	2.6	—	—	—
Tomatoes	1,995	57.9	16.5	1,005	23.9	4.2	—	—	—
Other Vegetables	783	22.7	6.5	1,337	31.8	5.5	1,350	54.2	3.8
Total	3,446	100.0	28.6	4,204	100.0	17.4	2,490	100.0	7.0
Other Food									
Eggs	1,086	68.8	9.0	715	44.1	3.0	2,902	46.8	8.1
Meat and Cheese	—	—	—	—	—	—	1,286	20.8	3.6
Jams and Jellies	—	—	—	29	1.8	.1	—	—	—
Honey	28	1.8	.2	71	4.4	.3	96	1.5	.3
Miscellaneous	465	29.4	3.9	805	49.7	3.3	1,915	30.9	5.3
Total	1,579	100.0	13.1	1,620	100.0	6.7	6,199	100.0	17.3
Non-Food	35	100.0	.3	169	100.0	.7	14	100.0	—
Total Sales	12,045	100.0	100.0	24,168	100.0	100.0	35,798	100.0	100.0

Table V). Fruit sales were 58 percent of the total in the low profit group while in the intermediate and high profit groups they were about 75 percent of total sales. The percent of sales accounted for by vegetables declined from about 28 percent in the low profit markets to 7 percent of sales in the high profit markets (Appendix Table V). "Other food" sales were slightly greater among high profit than among low and intermediate profit markets.

Apple sales were about half of total fruit sales in the low profit group, three-fourths in the intermediate group, and two-thirds in the high profit group (Table 14). Peach sales were a greater proportion and strawberries a lower proportion of fruit sales among high profit than low profit markets. Among low profit markets, strawberries were 15.5 percent of total fruit sales while no strawberries were sold in the high profit group.

The proportion of vegetable sales provided by potatoes and miscellaneous vegetables was much greater in high profit than in low profit markets (Table 14). On the other hand, none of the high profit markets handled tomatoes or sweet corn.

Egg sales were the largest percent of "other food" sales in all market groups. However, they comprised more than two-thirds of total "other food" sales in the low profit group and only 45 percent in the intermediate and high profit markets (Table 14). Only the high profit markets sold meats and cheeses.

Cost of Goods Sold

Cost of goods sold by the low profit markets averaged \$9,265 per market (76.9 percent of gross sales), compared with \$16,543 (68.5 percent of gross sales) for the intermediate and \$23,389 (65.3 percent of gross sales) for the high profit markets (Table 15).

The low profit markets purchased 46.1 percent of the fruit they sold while intermediate profit markets purchased only 16.5 percent and high profit markets 37.6 percent (Table 15.) The intermediate profit markets also grew a much higher percentage of the vegetables they sold than low profit markets (Table 15).

Expenses

Expenses averaged \$3,171 per market for the low profit group, \$4,897 in the intermediate group, and \$7,276 in the high profit markets (Table 16). These figures were 26.4 percent, 20.5 percent, and 20.3 percent of sales for the low, intermediate, and high profit markets.

Hired labor was a much larger proportion of expenses and family labor a lower proportion of expenses among the high profit markets than among low and intermediate profit markets (Table 16). Total

labor as a percent of sales was lower for the intermediate and high profit markets than for the low profit markets.

Container and package costs were significantly lower in the high profit markets than in the low and intermediate profit markets. Depreciation and interest on owned capital were not significantly different among markets in the three groups (Table 16).

Returns to Management

Returns to management in the low profit markets were negative while in the high profit markets returns to management were 14.3 percent of sales (Table 17). Returns to management plus family labor, net operating margin, and gross margin were the largest percent of sales in the high profit group.

Cost of goods sold was 76.9 percent of sales in the low profit group compared with 65.3 percent in the high profit group.

TABLE 15.—Average Cost of Goods Sold by Low, Intermediate, and High Profit Markets, Ohio, 1965.*

Product and Class	Average Cost of Goods Sold per Market	Percent of the Total Cost of Goods Sold	Percent of Each Class Purchased	Percent of Each Class Home Produced
Five Low Profit Markets				
	Dollars	Percent	Percent	Percent
Fruit	5,451	58.3	46.1	53.9
Vegetables	2,586	27.9	74.0	26.0
Other Food	1,201	13.0	64.0	36.0
Non-Food	27	.8	100.0	—
Total	9,265	100.0	56.3	43.7
Seven Intermediate Profit Markets				
	Dollars	Percent	Percent	Percent
Fruit	12,407	75.0	16.5	83.5
Vegetables	2,910	17.6	32.2	67.8
Other Food	1,105	6.7	100.0	—
Non-Food	121	.7	100.0	—
Total	16,543	100.0	25.5	74.5
Five High Profit Markets				
	Dollars	Percent	Percent	Percent
Fruit	16,472	70.4	37.6	62.4
Vegetables	1,879	8.0	96.6	3.4
Other Food	5,028	21.5	97.7	2.3
Non-Food	10	.1	100.0	—
Total	23,389	100.0	55.3	46.7

*Since some of these retailers did not report retail margins by product class, no attempt was made to indicate such margins in this table.

TABLE 16.—Expenses of Low, Intermediate, and High Profit Markets, Ohio, 1965.

Expense	Low Profit			Intermediate Profit			High Profit		
	Average per Market	Percent of Expense	Percent of Sales	Average per Market	Percent of Expense	Percent of Sales	Average per Market	Percent of Expense	Percent of Sales
	Dollars	Percent	Percent	Dollars	Percent	Percent	Dollars	Percent	Percent
Hired Labor	629	19.8	5.2	910	18.6	3.8	2,288	31.4	6.4
Family Labor*	600	18.9	5.0	829	16.9	3.4	659	9.1	1.8
Containers and Packages	600	18.9	5.0	1,031	21.0	4.3	874	12.0	2.4
Utilities	309	9.8	2.6	272	5.6	1.1	367	5.0	1.0
Depreciation	225	7.1	1.9	265	5.4	1.1	567	7.8	1.6
Advertising	244	7.8	2.0	268	5.5	1.1	337	4.6	.9
Interest on Owned Capital	201	6.3	1.7	244	5.0	1.0	524	7.2	1.5
Truck and Auto	179	5.6	1.5	375	7.7	1.6	318	4.4	.9
Rent	80	2.5	.7	38	.8	.2	240	3.3	.7
Taxes	38	1.2	.3	206	4.2	.9	213	2.9	.6
Insurance	24	.8	.2	139	2.8	.6	347	4.8	1.0
Heat	29	.9	.2	46	.9	.2	109	1.5	.3
Repairs	13	.4	.1	89	1.8	.4	180	2.5	.5
Office	—	—	—	19	.4	.1	205	2.8	.6
Miscellaneous	—	—	—	166	3.4	.7	48	.7	.1
Total	3,171	100.0	26.4	4,897	100.0	20.5	7,276	100.0	20.3

*Family labor for all markets was valued at \$1 per hour.

TABLE 17.—Returns to Management for Low, Intermediate, and High Profit Markets, Ohio, 1965.

Item	Low Profit		Intermediate Profit		High Profit	
	Average per Market	Percent of Sales	Average per Market	Percent of Sales	Average per Market	Percent of Sales
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Total Sales	12,045	100.0	24,167	100.0	35,798	100.0
less Cost of Goods Sold	9,265	76.9	16,543	68.5	23,389	65.3
Gross Margin	2,780	23.1	7,624	31.5	12,409	34.7
less Expenses*	2,370	19.7	3,824	15.8	6,093	17.0
Net Operating Margin	410	3.4	3,800	15.7	6,316	17.7
less Interest on Owned Capital	201	1.7	244	1.0	524	1.5
Returns to Management and Family Labor	209	1.7	3,556	14.7	5,792	16.2
less Family Labor	600	4.9	829	3.4	659	1.9
Returns to Management†	-391	-3.2	2,727	11.3	5,133	14.3
Total per Hour	-0.48	—	3.24	—	5.24	—

*Except interest on owned capital and family labor.

†Returns to management include the operator's labor.

Price Policies

The average price charged for Red Delicious apples was 14 cents a peck higher in the high profit than in the low profit markets (Table 18). The same trend was apparent for Jonathan and Winesap apples and for Red Haven peaches.

Price policies of the low, intermediate, and high profit groups varied somewhat. Managers of intermediate and high profit markets indicated they considered several factors when determining the retail price while managers of low profit markets reported they considered only one or two factors.

The factors which managers of intermediate and high profit markets reported they considered were: the price competitors charged, the price charged the previous year, the wholesale price listing, supply and quality of the product, and what the clientele will pay. These managers generally varied the price of apples, lowering it after January 1 during the 1964-65 season, while managers of low profit markets did not vary the price during the season.

TABLE 18.—Average Retail Price Obtained for Specific Items at Harvest by Low, Intermediate, and High Profit Markets, Ohio, 1965.

Product	Low Profit	Intermediate Profit	High Profit	Average Wholesale Price*
Dollars Price per Peck				
Apples				
U. S. No. 1 Red Delicious	1.25	1.36	1.39	.90
U. S. No. 1 Jonathan	.96	1.09	1.15	.70
U. S. No. 1 Winesap	.95	1.11	1.15	.70
Peaches				
U. S. No. 1 Red Haven	1.46	1.59	1.79	1.30
U. S. No. 1 Hale Haven	1.41	1.57	1.42	1.20
Price per Dozen				
Sweet Corn	.48	.60	—	.36
Price per Peck				
Tomatoes	1.25	1.21	—	.92
Price per Quart				
Strawberries	.41	.56	—	.35

*Fresh Fruit and Vegetable Market News, Fruit and Vegetable Division, U. S. Dept. of Agriculture, Cleveland, Ohio. Average price of apples, October 18-22; Red Haven, August 4-9; Hale Haven, August 23-27; strawberries, July 7-11; tomatoes, July 26-August 2; sweet corn, July 12-16.

TABLE 19.—Average Hours of Owner, Family, and Hired Labor Used in Low, Intermediate, and High Profit Markets, Ohio, 1965.

Profit Group	Average Hours per Market			Total
	Owner	Family	Hired	
Low	815	600	629	2,044
Intermediate	842	829	614	2,285
High	980	659	1,960	3,599
Average	879	696	1,068	2,643

Labor Used

The managers of high profit markets spent more hours in the market than the owners of low profit markets (Table 19). However, most of the additional hours were due to the fact that high profit markets were open 10 months per year, intermediate markets 8.5 months, and low profit markets 8 months.

The managers of low profit markets earned a negative return (—\$0.48) per hour, while intermediate market managers earned \$3.24 and the high profit market managers \$5.24. Per hour return to combined management and family labor was \$0.15 for the low profit group, \$2.13 for the intermediate group, and \$3.53 for the high profit markets.

Population

Population within 5 miles of the low profit markets ranged from 20,405 to 137,670, for the intermediate group from 7,946 to 102,597, and for the high profit group from 20,820 to 86,402 (Table 20).

Location

The 11 markets located on state highways had average sales of \$17,869 per market and the 6 markets situated on township and county roads had average sales of \$16,838.

TABLE 20.—Population within 5 Miles of Low Intermediate, and High Profit Markets.

Profit Group	Average per Market Group	Median Population per Market Group
	Number of People	
Low	50,005	30,230
Intermediate	46,675	34,953
High	41,638	35,511
Average	46,106	33,565

*1960 Census of the United States.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Farm roadside marketing as a means of direct selling to the consumer affords farmers the opportunity of increasing their gross income and obtaining a greater portion of the price paid by consumers.

Average annual sales per market for the 17 markets increased by more than \$5,000 between 1962 and 1965.

For markets with the larger sales, a substantially greater proportion of total products sold were comprised of vegetables and "other food" products. For the larger markets as well as for the more profitable markets, more hours of family labor were used, although family labor comprised a smaller proportion of labor supply than in the other markets.

On the average, all market size groups showed a positive return to management. High sales did not necessarily insure high profit. However, markets with a larger volume of sales returned more to the owner than those with smaller gross sales.

Several differences were apparent when high profit markets were compared with low profit markets. First, total sales and sales per dollar invested were higher among the high profit than low profit markets. Second, apples and peaches accounted for a greater portion of fruit sales among the high profit markets. Third, high profit markets sold meats and cheeses as well as fruits and vegetables and low profit markets did not sell meats and cheeses. Fourth, vegetables made up a much smaller proportion of total sales in the five high profit markets than in the five low profit markets. Fifth, retail margins were greater among the high profit markets and prices charged for fruit were higher in the high profit than low profit markets. This different pricing policy of the high profit markets appears to be the most significant single factor other than volume of sales in explaining the difference in profits.

The population adjacent to the fruit and vegetable producers in this study did not appear to be associated with market success. Population adjacent to most northeastern Ohio producers appears to be large enough for them to establish a profitable farm roadside market.

Although the number of people within 5 miles of the market and type of road on which the market was located were not related to volume of sales or to relative profit, it is possible that "quality" of customers may vary (i.e. their income and their willingness or desire to purchase fresh fruits and vegetables at a farm market). In the absence of such information, it is assumed that equal numbers of people indicate equal potentials available to various market operators.

Some operators, through superior management, have very profitable operations and others with similar conditions have had low profits

or losses. This emphasizes the fact that profits from farm retailing are not automatic but occur only when adequate management is applied to the market operation. None of the markets in this study had a sales volume so small or of such a nature that profits were not possible. Much of the difference between the loss of \$0.48 per hour in the five low profit markets and the return of \$5.24 per hour for the managers of the five high profit markets must be credited to the effectiveness of management.

This analysis does not describe fully the causes of differences in profits among these retail operations. The financial success of a market depends on unmeasured and often largely unmeasurable factors related to the personality of the operator and to the image that the market creates in the minds of its customers, as well as on prices, retail margins, and other measurable factors which may or may not affect the image of the market and its profits. It appears that there is great room for variability, for unique appeals to customers, and for individuality in pricing and merchandising methods in farm roadside markets.

APPENDIX

TABLE I.—Date of Establishment of 118 Roadside Markets Doing Business in 1964.

Year	Total Number	Percent	
		Annual	Cumulative
1963	4	3.39	3.39
1962	5	4.24	7.63
1961	6	5.08	12.71
1960	6	5.08	17.79
1959	7	5.94	23.73
1958	7	5.94	29.67
1957	2	1.69	31.36
1956	5	4.24	35.60
1955	1	.85	36.45
1954	5	4.24	40.69
1953	0	—	40.69
1952	4	3.39	44.08
1951	4	3.39	47.47
1950	7	5.94	53.41
1949	10	8.47	61.88
1948	2	1.69	63.57
1947	3	2.54	66.11
1946	3	2.54	68.65
1945	2	1.69	70.34
1944	10	8.47	78.81
1943	0	—	78.81
1942	0	—	78.81
1941	2	1.60	80.50
1940	1	.85	81.35
1939-35	5	4.24	85.59
1934-30	10	8.47	94.06
1929-25	0	—	94.06
Prior to 1925	7	5.94	100.00
Total	118	100.00	

Source: Cravens, M. E., J. E. Jeffries, and T. A. Bennett. 1964. Census Study of Roadside Markets in Northeast Ohio. Department of Agricultural Economics and Rural Sociology, The Ohio State University and Ohio Agricultural Research and Development Center.

TABLE II.—Average and Total Sales of 17 Farm Roadside Markets, Ohio, 1962-1965.

Year	Total Sales	Average Sales per Market	Annual Percent Change in Sales
			Percent
	Dollars	Dollars	
1962	317,000	18,677	
1963	285,500	16,794	-10.0
1964	365,788	21,517	28.0
1965	408,329	24,019	11.6

TABLE III.—Gross Sales of 17 Farm Roadside Markets, Ohio, 1964-1965.

Item	1964		1965	
	Average Sales per Market	Percentage	Average Sales per Market	Percentage
	Dollars	Percent	Dollars	Percent
Fruit	15,454	71.8	17,505	72.9
Vegetables	3,557	16.5	3,476	14.5
Other Food	2,443	11.4	2,954	12.3
Non-Food	63	.3	84	.3
Total	21,517	100.0	24,019	100.0

TABLE IV.—Gross Sales of 17 Farm Roadside Markets, Three Sales Classes, Ohio, 1965.

Item and Class	Average	
	Dollars	Percent of Total
Small (less than \$15,000)		
Fruit	10,031	88.3
Vegetables	643	5.7
Other Food	644	5.7
Non-Food	47	.3
Total or Average	11,365	100.0
Medium (\$15,000-\$30,000)		
Fruit	15,586	69.5
Vegetables	4,495	20.0
Other Food	2,183	9.7
Non-Food	156	.8
Total or Average	22,420	100.0
Large (more than \$30,000)		
Fruit	41,275	67.7
Vegetables	8,993	14.7
Other Food	10,657	17.5
Non-Food	40	.1
Total or Average	60,965	100.0

TABLE V.—Gross Sales by Low, Intermediate, and High Profit Markets, Ohio, 1965.

Item	Average per Market	Percent
Five Low Profit Markets		
	Dollars	Percent
Fruit	6,985	58.0
Vegetables	3,446	28.6
Other Food	1,579	13.1
Non-Food	35	.3
Total	12,045	100.0
Seven Intermediate Profit Markets		
	Dollars	Percent
Fruit	18,175	75.7
Vegetables	4,204	17.4
Other Food	1,620	6.7
Non-Food	169	.7
Total	24,168	100.0
Five High Profit Markets		
	Dollars	Percent
Fruit	27,095	75.7
Vegetables	2,490	7.0
Other Food	6,199	17.2
Non-Food	14	.1
Total	35,798	100.0

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Western Branch, South Charleston, Clark County: 428 acres